

What is claimed is:

1. In a computing system, a method for providing automatic universal resource locator (URL) analysis in connection with a process implicating a URL input mechanism, comprising:
  - receiving URL input from a client computing device;
  - analyzing the URL input and determining whether the URL input is valid;
  - when the URL input is invalid, performing analysis based upon one of (1) at least one database of known URLs and (2) rules-based analysis of the invalid URL input; and
  - suggesting at least one alternative URL based upon said analysis.
2. A method according to claim 1, wherein the at least one database of known URLs includes a dynamically updated database of current URLs.
3. A method according to claim 1, wherein the at least one database of known URLs includes a top URL list checked before any other database.
4. A method according to claim 3, wherein the at least one database of known URLs includes secondary list which is analyzed after the top URL list if at least one alternative URL is not found based on an analysis of the top URL list.
- 20 5. A method according to claim 4, wherein the at least one database of known URLs includes a complete list of URLs which is analyzed after the secondary list if at least one alternative URL is not found based on an analysis of the secondary list.
- 25 6. A method according to claim 1, further including preprocessing the URL input to at least one of (1) remove non-domain name service (DNS) characters (2) to replace non-DNS characters and (3) to correct an error in protocol.
7. A method according to claim 1, wherein the client device includes a browser and the URL input is URL input intended for one of navigation to a Web site and search on a Web site.

8. A method according to claim 1, further including displaying the suggested alternative URLs to the user via an error page.

5 9. A method according to claim 8, further including performing a search with the URL input as a query and displaying the results of the search on the error page.

10. A method according to claim 8, further including displaying a link on the client computing device error page, which link, if input by the user, retries the original URL input

11. A method according to claim 8, further including tracking user behavior in response to the display of the error page.

12. A method according to claim 1, wherein the at least one database includes URLs that are weighted according to their popularity.

13. A method according to claim 1, wherein said rules based analysis includes applying rules from a rules based table.

20 14. A method according to claim 1, wherein said rules based analysis includes applying rules to the analysis based upon said at least one known URLs database.

15. A computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 1.

25 16. A modulated data signal carrying computer executable instructions for performing the method of claim 1.

17. A computing device comprising means for performing the method of claim 1.

18. In a computing system, a method for providing runtime automatic universal resource locator (URL) analysis and suggestion in connection with a service accessed from a client computing device utilizing a URL input mechanism, comprising:

5       inputting URL input to the URL input mechanism of the client computing device;  
analyzing the URL input and determining whether the URL input is valid and if invalid,  
transmitting said URL input to a server computing device for analysis based upon one of (1) at  
least one database of known URLs and (2) rules-based analysis of the invalid URL input; and  
suggesting at least one alternative URL based upon said analysis.

19. A method according to claim 18, further including preprocessing said URL input.

20. A method according to claim 19, wherein said preprocessing includes preprocessing the URL input to at least one of (1) remove non-domain name service (DNS) characters (2) to replace non-DNS characters and (3) to correct an error in protocol.

21. A method according to claim 18, wherein the at least one database of known URLs includes a dynamically updated database of current URLs.

20 22. A method according to claim 18, wherein the at least one database of known URLs includes a top URL list checked before any other database.

23. A method according to claim 22, wherein the at least one database of known URLs includes secondary list which is analyzed after the top URL list if at least one alternative URL is 25 not found based on an analysis of the top URL list.

24. A method according to claim 23, wherein the at least one database of known URLs includes a complete list of URLs which is analyzed after the secondary list if at least one alternative URL is not found based on an analysis of the secondary list.

25. A method according to claim 18, wherein the client device includes a browser and the URL input is URL input intended for one of navigation to a Web site and search on a Web site.

5 26. A method according to claim 18, further including displaying the suggested alternative URLs to the user via an error page on the client device.

27. A method according to claim 26, further including performing a search with the URL input as a query and displaying the results of the search on the error page.

28. A method according to claim 26, further including displaying a link on the client computing device error page, which link, if input by the user, retries the original URL input

29. A method according to claim 26, further including tracking user behavior in response to the display of the error page.

30. A method according to claim 18, wherein the at least one database includes URLs that are weighted according to their popularity.

20 31. A method according to claim 18, wherein said rules based analysis includes applying rules from a rules based table.

32. A method according to claim 18, wherein said rules based analysis includes applying rules to the analysis based upon said at least one known URLs database.

25 33. A computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 18.

34. A modulated data signal carrying computer executable instructions for performing the

method of claim 18.

35. A computing device comprising means for performing the method of claim 18.

5 36. In a computing system, a method for displaying alternative suggestions for an invalid universal resource locator (URL) input, comprising:

analyzing the invalid URL input based upon one of (1) at least one database of known URLs and (2) rules-based analysis of the invalid URL input;

first displaying at least one alternative valid suggestion in accordance with said analyzing; and

second displaying at least one search result based upon the URL input.

37. A method according to claim 36, further comprising third displaying a link which enables full blown search utilizing the URL input as a query search term.

38. A computer readable medium having stored thereon a plurality of computer-executable instructions for performing the method of claim 36.

39. A computing device comprising means for performing the method of claim 36.

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40. A computing device providing automatic universal resource locator (URL) analysis in connection with a process implicating a URL input mechanism, comprising:

means for inputting URL input to the URL input mechanism of the client computing device;

25 means for analyzing the URL input and means for determining whether the URL input is valid and if invalid, transmitting said URL input with a means for transmitting to a server computing device for analysis based upon one of (1) at least one database of known URLs and (2) rules-based analysis of the invalid URL input; and

means for suggesting at least one alternative URL based upon said analysis.

10 41. A computing device according to claim 40, further including means for preprocessing said URL input.

15 42. A computing device according to claim 41, wherein said means for preprocessing includes means for preprocessing the URL input to at least one of (1) remove non-domain name service (DNS) characters (2) to replace non-DNS characters and (3) to correct an error in protocol.

20 43. A computing device according to claim 40, wherein the at least one database of known URLs includes a dynamically updated database of current URLs.

25 44. A computing device according to claim 40, wherein the at least one database of known URLs includes a top URL list checked before any other database.

30 45. A computing device according to claim 44, wherein the at least one database of known URLs includes secondary list which is analyzed after the top URL list if at least one alternative URL is not found based on an analysis of the top URL list.

35 46. A computing device according to claim 45, wherein the at least one database of known URLs includes a complete list of URLs which is analyzed after the secondary list if at least one alternative URL is not found based on an analysis of the secondary list.

40 47. A computing device according to claim 40, wherein the client device includes a browser and the URL input is URL input intended for one of navigation to and search on a Web site.

45 48. A computing device according to claim 40, further including means for displaying the suggested alternative URLs to the user via an error page on the client device.

49. A computing device according to claim 48, further including means for performing a search with the URL input as a query and means for displaying the results of the search on the error page.

50. A computing device according to claim 48, further including means for displaying a link on the client computing device error page, which link, if input by the user, retries the original URL input

51. A computing device according to claim 48, further including means for tracking user behavior in response to the display of the error page.

52. A computing device according to claim 40, wherein the at least one database includes URLs that are weighted according to their popularity.

53. A computing device according to claim 40, wherein said rules based analysis includes means for applying rules from a rules based table.

54. A computing device according to claim 40, wherein said rules based analysis includes means for applying rules to the analysis based upon said at least one known URLs database.